of the roots of the given equation, and Lagrange's solution by continued fractions are also explained.

In Chap. XI determinants receive a clear natural treatment, while the subject of resultants and discriminants is carefully and rigorously discussed in the closing chapter.

On the whole in this book there is much to praise and little with which to find fault.

ELIJAH SWIFT.

PROBLEMS AND SOLUTIONS.

B. F. FINKEL, CHAIRMAN OF THE COMMITTEE.

PROBLEMS FOR SOLUTION.

SPECIAL NOTICE. In proposing problems and in preparing solutions, contributors will please follow the form established by the MONTHLY, as indicated on the following pages.

In particular, a solution should be preceded by the number of the problem, the name and address of the proposer, the statement of the problem, and the name and address of the solver.

The solution should then be given with careful attention to legibility, accuracy, brevity without obscurity, paragraphing and spacing, having in mind the form in which it will appear on the printed page.

Please use paper of letter size, write on one side only, leaving ample margins, put one solution only on a single sheet and include only such matter as is intended for publication.

Drawings must be made *clearly* and *accurately* and an extra copy furnished on a *separate sheet* ready for the engraver.

Unless these directions are observed by contributors, solutions must be entirely rewritten by the committee or else rejected.

Selections for this department are made two months in advance of publication.

Please send all solutions direct to the chairman of the committee.

MANAGING EDITOR.

ALGEBRA.

When this issue was made up solutions of 410–19 had been received. Solutions of 406 and 420 are desired.

420. Proposed by ELBERT H. CLARKE, Purdue University.

Given the infinite series,

$$\frac{a}{r}+\frac{b}{r^2}+\frac{a+b}{r^3}+\frac{a+2b}{r^4}+\frac{2a+3b}{r^5}+\cdots,$$

in which a and b are any numbers and where each numerator after the first two is the sum of the two preceding numerators. To find the region of convergence and the sum of the series.

This problem is a generalization of one solved in the January number of the MONTHLY.

421. Proposed by C. N. SCHMALL, New York City.

Give a trigonometrical solution of the general quadratic equation.

GEOMETRY.

When this issue was made up solutions of 437–38–39–40–43–45–47–48–54 had been received. Solutions of 427–30–32–33–44–46 are desired.

449. Proposed by H. E. TREFETHEN, Colby College.

Find a tetrahedron with the face angles at one vertex in arithmetical progression and its six edges expressed in integers.